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DISCUSSION

ULTIMATE HYPOTHESES IN PSYCHOLOGY

THE sciences of physical nature, with their laws of motion and conservation and the ether, have reached a much higher degree of organization than psychology, and their methods are consequently more analytic. It is a goal of development in the scientific view of the world to be able to describe all phenomena in a single set of terms whose meanings are interdependent. No doubt it is too soon to hope that the science of psychology and the disciplines related to her possess such ultimate hypotheses. The attempt to formulate them prematurely and thus change the plodding method of synthetic generalization into eagle-winged analysis is as yet likely to fail. Too few of the facts are in and too few of those which have been gathered are thoroughly understood.

It is notorious, however, that every science works and grows, from its earliest beginning under the rubrics of some far-reaching generalization or other, and as the sciences nearly all sprang from philosophy, their original generalizations were usually taken from the rich thesaurus of the earlier discipline. Later, they have lent their aid to each other in this respect.

It means a step forward when these earlier, more or less unconsciously accepted, conceptions become the objects of conscious analysis and criticism. Such steps were taken in psychology when the doctrine of mental faculties was criticized and rejected, when the idea of a substantial soul was revised, when the issue was raised between structural and functional psychology, when the term consciousness was first brought into the focus of discussion, when the reflex arc concept was examined with reference to its availability for purposes of organization in psychology, and when such terms as knowledge, feeling, and will are more exactly defined. Professor Calkins's papers on "Psychology, What is it About?"[1] and her other papers[2] on related topics belong to this field of discussion.

In the sciences of physical nature the demand for comprehensive generalizations has led to three types of conceptions, namely, to conceptions of nature as discrete, as continuous, and as a totality. The atom theory, the ether hypothesis and the law of conservation may be said to represent these lines of development. With the introduction of the atom theory into modern physics came also the concept of force based on the notion of motion. What had been the conservation of motion became the conservation of force. The resulting dualism remained a practically unsolvable problem until the doctrine of an ether was formulated and the atom was conceived as a form of motion in this universal and continuous medium. It may throw some light on the problem of ultimate generalizations in psychology if we ask whether analogous results are to be reached in its field. Psychologists have conceived sensations and sought to show how by complication and fusion, association and contrast, sensations become the relatively more concrete and complex contents of experience. We have doctrines of relational and affective elements which supplement the sensations in the description of states of consciousness. Psychology has also conceived all things mental as functions and the mind as a system of functions, analogous to the physical doctrine that all matter is a form of motion. We have, again, a conception of consciousness as a sort of continuous medium in which sensations and functions are forms and modifications. The principles of individuality and totality are evident in such conceptions as mind and self. It looks as though discreteness, continuity, and totality are logical demands which we more or less unconsciously seek to satisfy in the organizing conceptions of psychology no less than in physics, and I take it that the fundamental conceptions of the science of mind are not mere analogies based on the older and more highly organized physical sciences, so much as necessary results of the attempt to conceive sentient life scientifically. For science proceeds by analyzing the complex into elements no less than by reducing to a single law whatever admits of synthesis, by finding continuity where there are apparent gaps no less than by finding gaps where there is apparent continuity, and by organizing its results into unique totalities. It is not possible to prescribe ideals for any special science further than to point out the laws of consistency in accord with which they will be found, but in psychology considerable progress in this direction has already been made. The science of psychology is to-day one huge welter of conflicting demands, among which the most recent or the loudest voice is most apt to receive attention.

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[1] This JOURNAL, Vol. V., p. 673, and Vol. VI., pp. 12, 64, 113.

[2] "A Reconciliation of Structural and Functional Psychology," *Psychological Review*, Vol. XIII., and *Der doppelte Standpunkt in der Psychologie.*

This is not an epistemological or metaphysical problem so much as one in the logic of psychology, and we hope it may not be unwelcome to the author of the papers on, "Psychology, What is it About?" if we set down here a series of reflections on her discussions. In the first place, psychology is defined in these papers as the science of self, and we understand by that term the individual human self, rather than selfhood as a general aspect of experience. All studies of sentient life below that of man must be based on the psychology of self and be controlled by it. That this has not so far been the case is evident in the studies of comparative and genetic psychology. This may be due to the undeveloped state of genetic and comparative psychology, and in the end it may prove that continual reference to the individual self will be a great aid in this field. But it needs to be pointed out that in making the individual self the ideal of psychology we are making it our aim to describe a *whole* rather than any special aspect of many wholes, and so far at least our aim is philosophical rather than scientific. The significance of this fact seems to the present writer evident, and especially so when we ask what descriptive value the term self would have in dealing with the process of perception, or impulse, or any other special topic of psychology.[3] The self, so defined, is a principle of neither discreteness nor continuity. If the self be conceived as a special form of activity or special type of function analogous to Descartes's vortical conception of the physical universe or Lord Kelvin's vortical theory of the atom, the conception would have a descriptive value in all problems in which the self-thought or the self-function is a factor. But in the papers before us the self is rather a complex whole which includes all psychic functions.

This point may be briefly stated in the form of a question, *Is* the self a process, or does it *have* processes? If by the self is meant simply the self-thought, a particular process among the many processes which make up the psychic life, it will have descriptive value. But in this case the psychology of self will constitute only a special chapter of the science. This chapter deserves a much larger place in psychology than the majority of writers have seen fit to give it, and it is one of the merits of Miss Calkins's "Introduction" that it is in this respect an exception to the general rule. The origin and growth of the self-thought and its controlling function in deliberation, will, and the ideal emotions constitute one of the most interesting and, for the entire group of *Geisteswissenschaften*, one of the most important of all the chapters of psychology. If, on the other hand, the self is conceived, not as a process or function, but as that which *has* processes, if it be conceived as that of which all processes are the predicates, the present writer is at a loss to see what advantage it can have over a number of other convenient rhetorical or grammatical devices, such as the psychic life, consciousness, the soul, the individual, etc. In this sense we should use the term only as the term nature is used in such expressions as natural selection or the laws of nature. And even then, is it not apt to prove misleading? Is is not apt to prepossess the minds of students with uncritical metaphysics?

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[3] For a similar criticism by M. F. Washburn, see this JOURNAL, Vol. II., p. 715.

That Miss Calkins has in mind a philosophical rather than a scientific use of the term self was first suggested to us by the passage in which she replies to the criticism of self-psychology by Angell, that it places a needless gulf between "the self as mind and the self as body for the crossing of which we are forthwith obliged to spend much needless energy, as the gulf is of our own inventing."[4] The reply reads in part, "As psychologists, once more, we are not concerned with the philosophical problem of the relation of body and mind; we take for granted the existence of the two, and their relation, on the ground of observation behind which we, as *scientists*, have no business to probe."[5] I understand that the term self is here used as interchangeable with the term mind, and body in that case must be one of the meanings of the term not-self. "As scientists, we have to start out from the standpoint of every-day adult consciousness: and for this the distinction between mind and body is already clearly made." Now all this reads like philosophy. If we take the plain man's shifting dualism of mind and body and put it through a fixing bath out of which it comes a distinction between self and body, we certainly introduce into psychology the control of an organizing conception which will influence the phraseology and the classifications of the science from beginning to end, and we do this without first taking up for careful criticism a popular and naïve dualism of very doubtful validity. It is one of the problems of psychology to trace the origin and growth of body and mind as ideal constructs. It is one of the problems of philosophy to investigate the validity of these constructs. It is another of the tasks of psychology to describe the genesis of the dualism of self and not-self. Indeed, we go much farther than the plain man does when we identify self with mind and separate it in conception from the body. The plain man sometimes speaks of his body as a thing which he possesses, and more frequently still he speaks of another's body as belonging to that other. But where he refers to his own body in this way once he refers to it many times as an identical portion of himself. It is much easier and more natural to distinguish between the mind and the body of *another* than to distinguish between the two in one's own case, and every one must have observed that we speak of ourselves as having minds and of losing our minds just as easily and naturally, to say the least, as we speak of ourselves as having bodies or of losing our bodies. What shall be said of a man's identifying himself with his bank account, his bonds or his railroad system? An Illinois farmer remarks, "The rains haven't hurt me yit,'' meaning that they have not washed the soil off his land or deposited sand on the top of it. Similarly a Congressman identifies his constituency, the people who support him with their votes, with himself. Any attempt to rob him of their patronage is an attack upon himself. It is a psychological fact that I identify with myself, not only my body, but whatever belongs to me, whatever I have produced, my family, my friends, my scientific theory and religious hopes, etc. As psychologists, ought we not to keep within the empirical use of the term self? If we go beyond the self as experience and by conceptual delimitation exclude from it the experience of body and the material world generally, are we proceeding as scientists or as philosophers?

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[4] Angell, "The Province of Functional Psychology," *Psychological Review*, Vol. XIV., p. 82, note.

[5] This JOURNAL, Vol. V., p. 15.

But Miss Calkins holds that ''all consciousness is self-consciousness,'' although of course the self is not equally explicit in all states of consciousness. Only in the sense of ''the ever-present, inchoate self-consciousness of each experience'' is the self omnipresent in psychic life. In this sense ''one never is conscious at all without an awareness, however vague, confused, unanalyzed, and unexpressed, of oneself-being-conscious.''[6] In an article entitled, ''Feeling and Self-Awareness,''[7] the present writer once argued that self-consciousness is vaguely and implicitly present in all feeling, and, since all consciousness is affective, in all consciousness. But this vague self-awareness of feeling is identical with the immediate experience of value. In the emotion of fear, there is an immediate sense of value and, *logically speaking,* all value involves a point of reference which we may call the self. In the emotion of fear, however, the self is not involved as an object of consciousness, and the self-reference in it is simply the finality of all impulse. We wish to emphasize the fact that this immediate experience of value, this purposive view of the object of consciousness, is a matter of universal experience and a matter with which psychology especially has to do. Whether it is this fact that Mr. W. Boyce Gibson[8] charges Miss Calkins with neglecting, we can not be sure. Whether it is the psychological teleology of all conscious processes, emphasized by Spencer and the school of biological psychologists, is not clear. In the psychology of Spencer psychological terminology is often little more than a fish-net to cover the nakedness, or a series of plasters to fill in the gaps, of biology.

However this may be, the teleology of all mental states and processes is one of the distinctive marks of psychological data. In its universal form it is nothing but purposive impulse, and yet it is just possible that in this immediate experience of value we are to find the chief differentia of the data of psychology. If this were all that Miss Calkins meant by defining the subject as the science of self, there would be much to say in favor of her view. Psychology, from this point of view, would be the science which deals with the various contents of experience in so far as they possess immediate value. The data of psychology surely ought to possess some distinguishing mark, and here is a characteristic which falls entirely within consciousness and distinguishes psychological data from those of all other natural sciences. Not all values are immediate and not all immediate things are the exclusive data of psychology. Immediate values are the data of no science except psychology. To define psychology as the science of selves seems to make necessary much further exposition to make our meaning intelligible, and it assumes (what is not *prima facie* evident and what many are not ready to grant) that the immediate experience of value is an implicit experience of self. Self-consciousness, as an explicit reflective experience, is an experience of values—psychologically speaking, individuality seems to be a function of feeling—but not all immediate values can be described as self-consciousness without begging a question with reference to which unanimity of opinion does not exist, and without being guilty of the psychologist's fallacy of reading into the immediate experience of value distinctions which belong to a special form and stage of mental life.

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[6] This JOURNAL, Vol. V., p. 68.

[7] *Psychological Review,* Vol. IX., p. 570, f. 1.

[8] In his review of "Der doppelte Standpunkt in der Psychologie," *Mind,* 1906, pp. 106 ff.

Professor Calkins speaks of "the basal fact of psychology" as the self, "immediately known as persistent, inclusive, unique, and related."[9] A considerable portion of her third paper is devoted to the elaboration of these "positive characters."[10] "Every one admits . . . that identity can not be attributed to ideas . . . because these are by hypothesis evanescent and fleeting. It follows that identity is a character of the self. . . . But if one scrutinize the real meaning of the statement, 'memory—or reason, or will—is a persistent function,' one finds it to be simply this, that one and the same self at any time may remember, or reason, or will." "The self is, in the second place, not only persistent, but inclusive; it is, in other words, a complex of ideas, functions, experiences." "A third significant character of the self is uniqueness . . . experienced most clearly in our emotional and volitional consciousness." In the fourth place, "I think of myself not only as unique, but as related, not only as a this-not-another, but as a this-in-relation-with-another." This "immediately experienced self-relatedness" is a character to be admitted and not argued about by the psychologist. "I can not, indeed, describe or distinguish myself except in terms of my relatedness to other selves; if I drop out of my conception of myself the consciousness of being child, brother, friend, and citizen, I simply lose myself." "I wish to emphasize the truth that all these characters of the self are immediately experienced. Only as such, I hold, have we a right to use them in describing consciousness. For though psychology, like every science, deals with concepts reflectively formed, not with immediate experiences, yet the peculiarity of psychology is precisely this, that it has to do with the concept of *immediate experience.*"

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[9] This JOURNAL, Vol. V., p. 114.

[10] *Ibid.*, Vol. V., pp. 65–68.

We take the liberty of interpreting the last sentence in the light of the contributions which Professor Calkins has made to the science and literature of her specialty, where she seems to us to deal masterfully with some of the immediate aspects of experience denoted by the concept of immediate experience. Psychology is not an analysis and synthesis of concepts comparable with the points, the number series, the orders and group relations of mathematics. It deals with an objective order which it seeks to describe scientifically. As to the other contentions of the passages just quoted, however, we wish to point out that neither the persistence, the inclusiveness nor the relatedness of phenomena is ever immediate. They are not immediate in the case of a stone or a star, and just as little so in the case of self. The *processes of judging* that the self possesses these characters are immediate—that, unquestionably,—and it may be that the practise of psychological reflection has become so habitual to some of us that we sometimes confuse the immediacy of the process of judging with the immediacy of the object or content of judgment. The present writer could as easily accept the proposition that the immortality of the soul is an immediate deliverance of consciousness as that the persistence, inclusiveness, and relatedness of the self are immediate. It certainly is true that I can not describe or distinguish myself except as related to other selves, and also that the judgments expressed in the descriptions are as processes of thought immediate. The predicates of my *judgments about* myself are all relations which I sustain to others. But this means that my knowledge of myself, like my knowledge of my neighbor's self is mediate, not immediate. The immediate experience of the process of conceiving immediate experience is made up of certain sensations of touch and vision, certain feelings of relation, and certain affective qualities, but these are, of course, only a special instance of the aspects of experience denoted by the concept.

Perhaps the clearest and most definite concept of psychology is that of sensation, the simplest value ascertainable by psychophysical methods. In Locke's theory of simple and complex ideas the sensation is an ultimate and irreducible element of knowledge, and it is so conceived by the majority of psychologists. Simple ideas are kinds of sensations or impressions. Newton, for example, thought that there are seven kinds of color sensation in the spectrum, but as some of these are derivable from other colors by mixing, the doctrine of three primary colors displaced the seven-color theory. Professor Titchener is right in saying that there are as many colors for psychology as there are distinguishable types of color value, and of these there are some 3,000 or more. Shall we say then that color experiences are really composed of these sensations? Certainly, but this does not tell the whole truth about the matter, because sensations are discrete and the spectrum is continuous. This large figure represents the number of acts of discrimination possible within the range of the spectrum, but the spectrum itself is a continuum of values in which points or lines of demarkation are arbitrary. Is the self of any value in the descriptive psychology of color? To say that colors belong to unitary complexes of experience called selves is to say just about as much (and as little) as to say that all atoms belonging to a unitary complex of processes called nature, that is, colors belong to conscious persons or selves conceived as centers of extra-psychological relationship, and as distinct totalities. Now there are two psychological problems which this conception of the self leaves entirely untouched: (1) what is the principle of continuity within the self? and (2) what are the elements into which its manifoldness is resolvable? Of course the definition of a science need not include its entire content, but it should include the differentia of the science.

As the principle of continuity within the self, we have become accustomed to the term consciousness. But is it consciousness or is it value? Perhaps some will say there is no difference, but we think there are differences. In the first place, consciousness is no longer an abstract noun, like roundness or smoothness, based on the character of being conscious which is predicable of sentient organisms. It is rather the name of an existence analogous to the matter which possesses roundness or smoothness. It is a thing possessing properties and relations such as the property of sentience and relations to the body. Value, on the other hand, is attributive to objects, and in making it the principle of continuity in psychology we should be eliminating from the science subjectivism in its most objectionable form. Again, value is a genuine aspect of all existences, while consciousness is not, and in making an aspect of existence the proper subject-matter of psychology we should be conceiving the science as all other special sciences are conceived nowadays. For the special sciences deal with special aspects of all things rather than with special groups of things. Again, value admits of and suggests both a structural and a functional analysis, just as the ether does in physics, while the same can not be said with equal propriety of consciousness. Finally, in the world of values the self is either a special form of function, or a structure, just as the atom or any other discrete totality in the physical world is either a special form of change in the ether or a special structure.

Psychology so conceived would comprehend both the conditions and the manifestations of the immediate experience of value, as well as its actual contents. In short, it would include all that it at present includes, and furnish points of easy relationship to both biology and the *Geisteswissenschaften* which depend upon it. Nearly the whole of physiological psychology is comprehended in the antecedents (or conditions) and consequents (or manifestations) of value. The analysis of value and its natural history or growth, taken together, would comprehend a doctrine of elements, a doctrine of combining principles, a description of mental complexes of various types and a doctrine of the self or social consciousness. Indeed, psychology would be very much what Miss Calkins and others conceive it to be. Its definition and some of its terminology alone will have been slightly altered.

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REVIEWS AND ABSTRACTS OF LITERATURE

The Animal Mind. A Text-book in Comparative Psychology. MARGARET FLOY WASHBURN. New York: The Macmillan Company. 1908. Pp. 333.

The study of animal behavior can be attacked from two points of view, the physiological or mechanical, and the psychological. The one has for its aim an immediate mechanical explanation of the phenomena involved, the other an immediate psychological explanation. The former proceeds from known chemical and physical principles and is based upon concepts of matter and energy gravitation, chemical affinity, electricity, etc. The latter proceeds from psychological principles, established in the study of human mental activities, and is based upon concepts of psychic elements. While these two fundamental classes of concepts may eventually prove to be merely different aspects of the same reality, they are, in the present state of knowledge, certainly not mutually exclusive, as some prominent writers would have us believe.

Little is known about either of these classes of concepts. In the last analysis there is as much mysticism connected with the postulates upon